Page 3 of 8

IN THE ABSTRACT

An internetworking system operating over an ATM backbone. The physical internetworking devices within the system are shared to provide the internetworking functions while servicing two or more distinct and isolated user networks. This is accomplished by logically partitioning the devices into distinct sub-elements which provide all or part of the internetworking functions. These sub-elements are uniquely allocated to independent realms which are then assigned to specific user networks.